

t60_ordinal3

(TMYHkRMu7RD2jPcSDpowh6ibnA6y8nnpTJR)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((X0 \neq k1_xboole_0) \Rightarrow (k1_xboole_0 \in X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ (v3_ordinal1 X2) \Rightarrow ((X0 \in X1) \Rightarrow (((\neg r1_ordinal1 X2 X0) \wedge (\neg X2 \in X0)) \vee \\ (k5_ordinal3 X0 X2 \in k5_ordinal3 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (k5_ordinal3 (k10_ordinal2 X0 X1) X0 = X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k5_ordinal3 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k10_ordinal2 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ (v3_ordinal1 X2) \Rightarrow (((r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 X0 X1) \Leftrightarrow \\ (X0 = k10_ordinal2 X1 X2))) \wedge ((\neg r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 \\ X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ (v3_ordinal1 X2) \Rightarrow ((X1 \in k10_ordinal2 X2 X0) \Rightarrow ((X0 = k1_xboole_0) \vee \\ (k5_ordinal3 X1 X2 \in X0)))))) \end{aligned}$$